

Appendix 2

Road Improvement Priorities

This Appendix divides the major road improvement projects in Appendix One, Design Guidelines for Major Roadways into the three priorities and associated time frames are as follows:

- Short Term (High Priority) (2002 - 2007)
- Intermediate Term (2008 - 2013)
- Long Term (2014 - 2020)

The concept of linking priorities to time frames is consistent with the logic of the Northern Virginia 2020 Transportation Plan. The six year time interval is consistent with the six year time cycle of the Virginia Transportation Development Plan and the Secondary Road Improvement Program.

Priorities are directly linked to the urgency of the need for the improvement. High Priority Improvements are needed for those roads which are already at Level of Service (LOS) “E” or “F” or are forecasted to descend to these levels within the next five years. The financial resources to construct these improvements must already be allocated to the project or this step needs to be taken in the next update of the Primary and Secondary road improvement programs. For private sector proffers there must be a high level of certainty that the pace of the project’s development will allow the construction of the road improvement in the short term.

This Appendix also includes cost estimates for major projects and the entity making these estimates (VDOT or staff). Sources for this required funding are also identified where known including already committed resources. This is done with the highest level of certainty for high priority projects. These cost projections will be updated based upon the results of the 2002 Virginia Legislative Session as well as revised Primary and Secondary Road Improvement cost estimates.

As the projects extend out to the Intermediate and Long Term Priorities 2008 – 2020, the quality of cost and revenue source estimates decreases since no engineering has been done on these projects and cost estimates must be made on the basis of assumptions which may change over time. Therefore, this information is best used in a broad strategic manner to guide the County’s participation in the various regional and state programs and organizations which are trying to identify priority projects and achieve increased funding. In addition, assumptions about proffers yet to be made are considerably less predictive than those involving proffers already made. Even with existing proffers, uncertainty is added when a project goes into a dormant phase preceding the initial phase of development or during development. Periods of proffer dormancy have already exceeded ten years for some projects.

This Appendix can be used to determine one important aspect of the intimate relationship between land use planning and transportation planning. If a development proposal is submitted which shows a substantial amount of development in the short term and this development needs Intermediate or Long Term priority transportation projects to be completed in order for the regional transportation system to function at acceptable levels-of-service, that project is most likely premature.

In the material that follows, staff has ranked projects in the Short Term Category based on existing or forecasted traffic volumes and levels-of-service which most clearly signal the need for each improvement. In the Intermediate and Long Term categories, no priority ranking for individual projects has been made within the broader priority category at this time.

Primary and Secondary Road projects are included together at the three priority levels. This Appendix is not inclusive of all roads in Appendix One and on the CTP maps. Any CTP Map/Appendix One road not discussed in this Appendix should be considered an Other Priority project. Discussions/cost estimates on these Other Priority roads will be added to future updates of Appendix Two. Like the Northern Virginia 2020 Transportation Plan, this ranking focuses on arterial and major collector roads. In major corridors, such as Route 7, 28 and 50, road improvement projects are split between Priority Categories as appropriate depending on traffic forecasts and identified funding. Costs have not been estimated for Rural Policy Area collector road improvements nor have priorities been assigned to them.

High Priority Projects (2002 –2007)

1. Route 28 PPTA Improvements

In May 2001, the CTB selected a private team of transportation firms to construct Route 28 improvements in Loudoun and Fairfax Counties under the provisions of the Public-Private Transportation Act of 1995 (PPTA). In September 2001, following contract negotiations, the PPTA Route 28 project team will assume responsibility for the completion of the Route 625 and Route 606 interchanges. The PPTA time schedule moves the completion of these two interchanges up to 2003 from their previous VDOT construction dates of 2005 and 2008. In addition, the PPTA project will construct interchanges at Route 28 and Nokes Boulevard, Sterling Boulevard and Innovation Avenue. The PPTA project will also widen Route 28 to eight lanes in Loudoun County from the County line to Sterling Boulevard. Currently, completion of all components of the Route 28 PPTA project in Loudoun County is scheduled for 2005. This construction schedule may be impacted depending on the results of the regional air quality conformity testing now being conducted by COG.

The following are the latest cost estimates (July 2001) available from the PPTA project team for the costs of the components of the project:

Route 625 Interchange - \$63 million
Route 606 Interchange - \$25 million
Sterling Boulevard Interchange - \$30 million
Nokes Boulevard Interchange - \$32 million
Innovation Avenue Interchange - \$9 million
Widening Route 28 to eight lanes - \$25 million

The total estimated cost of Route 28 PPTA improvements in Loudoun County is \$159 million.

The Route 625 and Route 606 interchanges, which will now be constructed by the PPTA project team, were previously in the Virginia Transportation Development Plan (VTPD) and also included in the regional Transportation Improvement Program (TIP) which achieved air quality conformity. Therefore, their construction schedule/funding will not be delayed by a subsequent finding of air quality non-conformity for future TIPs. Other portions of the Route 28 PPTA program could, however, be delayed by air quality conformity problems. Year 2000 traffic volumes on Route 28 south of Route 625 were 57,000 ADT. The at-grade intersection of Routes 28/625 currently operates at LOS "F" during weekday peak hours. Year 2000 traffic volumes on Route 28 south of Route 606 were 74,000 ADT. The at-grade intersection of Routes 28/606 currently operates at LOS "F" during weekday peak hours.

2. Interchange at Route 7/Claiborne Parkway (Just West of Ashburn Road)

The current at-grade intersection at Route 7/ Ashburn Road currently operates at LOS “E”/”F” during weekday peak hours. Congestion impedes access to Loudoun Hospital. Year 2000 traffic volumes on Route 7 east of Route 641 are approximately 52,000 ADT.

Cost Estimate (Staff) Phase 1: \$15,000,000 to \$20,000,000

Project Status: The first phase of the interchange is proffered for construction in 2003. County staff has met with the responsible private sector entity to attempt to keep Phase 1 on schedule. Completion of the full interchange is scheduled for 2007. The estimated cost for the entire interchange (staff) is \$25,000,000 to \$30,000,000. At this time no public funds are allocated to this project. Ashburn Road access to Route 7 will be terminated when the first phase of the interchange is constructed.

3. Widening of Route 606 to four median divided lanes between Route 50 and Route 621

The Route 606 approach to the Route 50/Route 606 intersection currently operates at LOS “F”. The existing two-lane section of Route 606 is not adequate for the approximately 10,000 ADT on this section of Route 606. Traffic from both Route 606 and Route 621 to the north is feeding into the existing two-lane section of Route 606.

Cost Estimate (VDOT): \$4,793,000

Project Status: This project is in the Secondary Road Improvement Program. The CTB has approved the project. The project is scheduled for construction by March 2002.

4. Route 15 Safety Improvements Project

Increasing traffic volumes on Route 15 have exacerbated safety problems on the existing two-lane section of Route 15 between Leesburg and the Maryland state line. A program of improvements for Route 15 is underway with the intent of addressing these concerns while retaining Route 15 in the two-lane section specified in this CTP. These improvements include widening lane width, widening and paving shoulders and constructing left and right turn lanes. Year 2000 traffic volumes on Route 15 between Leesburg and Lucketts are approximately 12,000 ADT.

Cost Estimates (VDOT)

Leesburg Town Limits –

White’s Ferry Road (Section 1)	\$2,975,000
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White’s Ferry Road –

Lucketts Road, Route 662 (Section 2)	\$5,327,000
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Lucketts Road – Maryland

state line (Section 3)	<u>\$5,325,000</u>
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Total	\$13,627,000
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Project Status: All three segments of Route 15 Safety Improvement Program are in the Virginia Transportation Development Plan . \$10,100,000 has been allocated to the project using Northern Virginia Priority Bond funds. Section 1, north to White’s Ferry Road is waiting for CTB approval. Completion of this section is scheduled for 2002. The completion of Section 2 to Lucketts Road is scheduled for 2004. Funding for Section 3 design (Lucketts Road to the Maryland state line) has been identified; however, a completion date has not been set.

5. Loudoun County Parkway between Route 625 to Route 7

Currently the Parkway has been constructed between its Greenway interchange north to Route 625 (six-lanes) and then to the W&OD (four-lanes). A two-lane section continues north to Redskins Park. There is also a four-lane section running south from Route 7 for a short distance. All of these existing sections have been constructed by private sector proffers. There is a need to construct a four-lane paved section to replace the unpaved section of Route 607 running between these paved sections. The project is needed to provide a direct connection of Loudoun County Parkway to Route 7.

Cost Estimate (VDOT): \$10,525,000

Project Status: A project to improve this unpaved section of the Parkway has been added to the Secondary Road Improvement Program. Completion is scheduled for 2007. \$1,720,874 of the estimated cost has been transferred to this project from unpaved road pavement projects in the Rural Policy Area of the County. This project plus two smaller unpaved road projects on Sycolin Road in eastern Loudoun County are likely to absorb all of the County's allocation of unpaved road funds for at least the next six years. Proffered cash equivalency funds may also be applied to this project.

Please note that Priority Project Number 4, Widening of Route 606 between Route 50 and Route 621 is also a Loudoun Parkway Project as that section of road is part of the Parkway's alignment. The Loudoun County Parkway between Route 50 south to Edgewater Street, a short distance north of Braddock Road is under construction via private section proffer and should be completed by 2003. The Edgewater-Braddock section should follow no later than 2005, again via private sector proffer.

6. Route 659, Belmont Ridge Road, between Route 7 and Route 625 North

The south Route 659 leg of the Route 659/Route 7 section is already experiencing LOS "F" conditions with substantial traffic backups south of the traffic signal. Current traffic volumes on Route 659 are approximately 8,000 ADT south of Route 7 decreasing to 4500 to Sycolin Road and 2,500 at 625 N, Waxpool Road. However, these volumes are expected to at least double in the next five years as homes are constructed in already approved sub-divisions.

Cost Estimates (VDOT)

Route 7—Route 642, Hay Road	\$11,110,000
Route 642—Route 625 N, Waxpool Road	\$9,110,000

Project Status: The two sections shown above have been added to the Secondary Road Improvement Program. Construction is scheduled for completion by 2007. \$3,916,138 of the estimated cost will be provided by existing private sector development projects.

7. Pacific Boulevard between Nokes Boulevard and Route 606. Atlantic Boulevard between Route 7 and Route 625 continuing as Davis Drive south to Route 606

Completion of these Route 28 parallel roads needs to be accomplished in coordination with the construction of the Route 28 interchanges to adequately serve the rapidly developing commercial corridor. Portions of these roads have been constructed through private sector proffers but key gaps remain. Staff identified six key gaps in the parallel road network and provided this information to VDOT. These gaps are in two cases the subject of dormant proffers and in four cases have no association.

Cost Estimate (Staff): \$10,000,000

Project Status: The segment of Pacific Boulevard running from the current end of pavement at AOL to Moran Road, Route 634, is not included in the cost estimate above since it is expected it will be constructed by private sector proffer (Eastport) by 2003. A preliminary subdivision has been approved in 2001 for the project (High Point) responsible for constructing Pacific Boulevard between Moran Road and Route 775. Therefore, this section of Pacific Boulevard may also be constructed by private sector proffer by 2003. There are currently no public funds allocated to the remaining gaps on Route 28 Parallel Roads. The construction of these improvements plus Pacific Boulevard north to Nokes Boulevard may be included in the Route 28 PPTA project.

8. Route 50 Traffic Calming Project, between the west end of Lenah and western limit of Route 50

This project is a national demonstration project in the application of traffic calming techniques on a rural minor arterial. The project is funded through special federal appropriations.

Cost Estimate (VDOT): \$10,938,000

Project Status: The project is being managed by a state appointed Task Force which is working with the County and local communities. A project consultant has been selected to prepare a plan and program for specific traffic calming projects. The completion date for construction of these projects has not been specified.

9. Route 9 Corridor Study and Safety Improvements between Route 7 Bypass and WV State Line

A corridor study is needed to determine what improvements are needed for a Route 9 Safety Improvement Project similar to the project now underway on Route 15. The Corridor Study also needs to consider methods of alleviating the road's impact on the Town of Hillsboro. Traffic volumes on Route 9 have now risen to 14,000 ADT at its Clarkes Gap interchange with Route 7 and 10,000 ADT at Hillsboro.

Estimated Cost (Staff): \$2,000,000 – Corridor Study Only

(Staff): \$25,000,000 – Safety Improvement Project

Project Status: Despite numerous requests from the County to the CTB, the Route 9 Corridor Study has not been funded. The funding source for the Safety Improvement Project could be the same as Route 15 which is Northern Virginia Priority Bond funds.

10. Route 7 interchanges will be needed at Loudoun County Parkway, Ashburn Village Boulevard, Route 659, and River Creek Parkway

These interchanges are estimated by staff to cost approximately \$100,000,000. There is a current proffer to construct the Loudoun County Parkway/Route 7 interchange and land dedication and some financial contributions at the other interchanges. However, an application has been submitted to the County, which if approved in its current form, would eliminate the Loudoun County Parkway/Route 7 interchange proffer and result in the County receiving only a \$500,000 contribution toward the interchange. The following are peak hour Levels of Service for the current at-grade intersections which would be replaced by the planned interchanges: Route 7/Route 641 – F; Route 7/Route 659 – E; Route 7/Ashburn Village Boulevard – D; Route 7/Presidential Drive – C/D.

Funding Summary for High Priority Projects

Estimated Costs – No Route 28 PPTA	\$167,706,000
Currently Funded	\$130,842,000
Balance to Complete	\$ 36,864,000
Estimated Costs with Route 28 PPTA	\$228,165,000

(The balance to complete would depend on the PPTA financial plan)

Intermediate Priority Projects (2008-2013)

- **Route 7 between Leesburg and Route 9**

Route 7 between Leesburg and Route 9 will need to be widened to six-lanes with a new interchange in the vicinity of White Gate Place and interchange improvements at Route 7/Route 9. Staff estimates this project will cost \$20,000,000. There is no currently identified funding source.

- **Route 7 North Parallel Road (Riverside Parkway) and South Parallel Road (Russell Branch Parkway)**

The Route 7 North Parallel Road (Riverside Parkway) and South Parallel Road (Russell Branch Parkway) will need to be completed in order for the Route 7 Freeway to operate effectively. It is expected these roads will be completed by proffer as development proceeds. The next section to be completed will likely be Riverside Parkway across Goose Creek to Indian Creek Parkway. A portion of Russell Branch Parkway has been constructed in Belmont, and portions of Riverside Parkway have been constructed in University Center and Lansdowne.

- **The Tri-County Parkway**

The Tri-County Parkway needs to be constructed between Braddock Road and the Fairfax County Line connecting with the sections of the road in Fairfax and Prince William Counties. VDOT has retained an EIS and Alignment consultant for the Tri-County Parkway in 2001 with study results anticipated by 2003. At this point it is not certain whether the initial construction of the Tri-County Parkway will be a four-lane or a six-lane road. Proffers are unlikely given adjacent densities. If the road is initially a four-lane divided section, staff estimates its cost in Loudoun County will be approximately \$10,000,000. There are approximately 2 miles of the Tri-County Parkway in the County south of Braddock Road. The sources of public funding are not known. One thing is certain, for any Intermediate Priority Project, a new federal transportation act will be in effect.

- **The Loudoun County Parkway**

The Loudoun County Parkway needs to be constructed between Route 772 and Route 606. If the initial section is four-lanes median divided, staff estimates its cost will be approximately \$10,000,000 including bridges. Since most of the alignments run through by-right subdivision areas, public funding will be needed. The sources of public funding are not known at this time.

- **Ashburn Village Boulevard**

Ashburn Village Boulevard needs to be expanded from two-lanes to four-lanes from the end of its current four-lane section to the Greenway. Estimated cost is \$1,000,000. State revenue sharing funds matched by County funds are a possible funding source.

- **Claiborne Parkway**

Claiborne Parkway needs to be completed across the W&OD. Estimated costs are not known since it is uncertain whether the road will go under or over the regional trail.

- **Pacific Boulevard**

Pacific Boulevard needs to be completed north across the W&OD trail to Gloucester Parkway. Estimated costs are not known since it is uncertain whether the road will go over or under the regional trail.

- **Route 50**

Route 50 needs to be expanded to six-lanes between Poland Road (Route 742) and the Fairfax County Line. The staff estimates a \$6,000,000 cost in Loudoun County. The existing four-lane section in Fairfax County between Loudoun County and Route 28 needs to be expanded to six-lanes. Again, the estimated cost is \$6,000,000.

- **Route 50/South Riding Boulevard Interchange**

The Route 50/South Riding Boulevard inter-change needs to be constructed. This facility is a final phase proffer of the South Riding project which is assumed to build out by the intermediate time frame.

- **Route 50/Loudoun County Parkway Interchange**

Route 50/Loudoun County Parkway interchange will need to be constructed at the same time that the Loudoun County and Tri-County Parkway are completed. Staff estimates this interchange will cost \$40,000,000. There are currently no identified public or private funding sources for this project.

- **Tall Cedars Parkway**

Tall Cedars Parkway will need to be constructed from Route 50 near Route 639 to Stone Ridge west of Route 659. Approximately half of this nine-mile road section will be constructed by South Riding. The funding source for the remainder of the section has not been identified. Staff estimates a cost of \$20,000,000 for the unfunded section.

- **Route 659 south of Route 50 (West Spine Road)**

Route 659 needs to be widened to four-lanes between Route 50 and the Prince William County Line. There are currently no public funds or proffers for this improvement. Staff estimates a cost of \$27,000,000 south of Braddock Road. North of Braddock Road the improvement is anticipated to be made by Private Sector Proffer.

- **Route 659 Relocated**

Route 659 Relocated will need to be a four-lane median divided road between the current Route 659 north of Brambleton and Route 50. It is expected Brambleton will build the northern portion of the road from Route 659 to its town center. Staff estimates the cost of extending the road south from this point to Route 50 to be approximately \$36,000,000.

- **Braddock Road**

Braddock Road needs to be widened to a four-lane median divided road between Route 659 Relocated and the Fairfax County Line. Staff estimates a cost of \$40,000,000 for this improvement. Current proffers may account for approximately twenty-five percent of this cost leaving an unfunded balance of \$30,000,000.

- **Route 606**

Route 606 will need to be expanded to four lanes median divided between Route 621 and the Dulles Greenway. Staff estimates the cost of this improvement to be \$30,000,000. There are dormant proffers for some sections of the road.

- **Route 50 North Collector Road**

The Route 50 North Collector Road needs to be constructed as a four-lane median divided road between the Loudoun County Parkway and Route 659 relocated. Staff estimates the cost of this improvement to be approximately \$27,000,000. A portion is covered by a private sector proffer.

Estimated Costs \$27,000,000

Currently Funded Not Determined

Other Priority Projects (2014 – 2020)

In this long-term time frame only major improvements are identified. It is expected that minor collectors in the Revised Countywide Transportation Plan will be constructed in the Suburban and Transition Policy Areas as necessary as development occurs through private sector proffers. Costs have not been estimated for improvements to Rural Policy Area collector roads.

- **Route 50 Interchanges at Route 639, Route 659, and West Spine Road/Claiborne Parkway Extended**

Route 50 interchanges need to be constructed at Route 639, the West Spine Road and Route 659 Relocated. Staff estimates these interchanges will cost approximately \$90,000,000. There are no identified funding sources.

- **Route 659 Relocated**

Route 659 Relocated needs to be constructed between Route 50 and the Prince William County Line at such time as Prince William County can construct the connecting segment south of the County boundary. Staff estimates this road will cost \$20,000,000.

- **Route 621**

Route 621 needs to be expanded to four-lanes and its Southern Boundary realigned to connect with Loudoun County Parkway. Staff estimates this will cost approximately \$50,000,000.

Estimated Cost \$50,000,000

Currently Funded \$0

Balance to Complete \$50,000,000